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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,367

12/20/2005

Shoji Ito

2005-2008A

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WENDEROTH, LIND & PONACK, L.L.P.

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SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

DWIVEDI, VIKANSHA S

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

09/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,367	Applicant(s) ITO ET AL.	
	Examiner VIKANSHA S. DWIVEDI	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/20/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figures 1, 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "12a" has been used to designate both first surface and lower surface. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by EP-A-0,905,381 (Ebara Corp.).

Ebara discloses a seal mechanism for a fluid machine to prevent a fluid from leaking out of a high-pressure space into a low-pressure space in the fluid machine(Figure 6), said seal mechanism comprising: an annular seal member (160) movable in a radial direction (Col. 4, ll. 36-38), said annular seal member having a first surface on a side of the low-pressure space in the fluid machine (lower side of 160 as shown in Figure 6); a housing (162) disposed between a body of the fluid machine and a rotatable member (Impeller in Figure 6) located inside the body of the fluid machine so as to receive said annular seal member (160), said housing (162) having a second surface (168, 170) facing said first surface of said annular seal member (160); and at least one passage (circumferential gap between 160 and 170) formed in at least one of said first surface (lower side of 160 as shown in Figure 6) and said second surface (168, 170) such that a negative pressure of the low-pressure space is introduced into said at least one passage (circumferential gap between 160 and 170) to bring said annular seal member (160) into close contact with said second surface (168, 170) of said housing (162); wherein said at least one of said first surface (lower side of 160 as shown in

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Figure 6) and said second surface (168, 170) comprises a flat surface (Figure 6, 160's lower side is flat).

Claims 11-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE EP-A-0,905,381 (Ebara Corp.).

With regard to claim 11-13, rotatable shat/ impeller (shown in figure 6) are inherent features of a pump and the seal mechanism as disclosed by Ebara is capable of being used in a centrifugal pump.

Claims 10, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19,37,418A (BBC Brown Boveri & CIE).

BBC discloses a fluid machine suitable to prevent a fluid from leaking out of a high-pressure space into a low-pressure space in the fluid machine, the seal mechanism comprising an annular seal member (1) movable in a radial direction, the annular seal member having at least two first surfaces (4, 13) on a side of the low-pressure space in the fluid machine, and a housing disposed between a body of the fluid machine and a rotatable member (12) located inside the body of the fluid machine so as to receive the annular seal member (1), the housing having a second surface (2) facing the at least two first surfaces (4, 13) of the annular seal member (1); and at least one passage formed in at least one of said at least two first surfaces and said second surface such that a negative pressure of the low-pressure space is introduced into said at least one passage (7, 14) to bring said annular seal member (1) into close contact with said second surface of said housing, wherein the at least two first surfaces (4, 13) of the annular seal member (1) include a radially outward surface (4) which is brought

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into contact with the second surface (2) of the housing over its entire surface, and a radially inward surface (13) located radially inward of the radially outward surface (4), the radially outward surface (4) projecting from the radially inward surface (13) toward the low-pressure space in the fluid machine; said seal mechanism being disposed between said body and said impeller (12); said seal mechanism being disposed between said body and said rotatable shaft (12); said seal mechanism being disposed between said body and said rotatable member(12).

Claims 14-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE 19,37,418A (BBC Brown Boveri & CIE).

With regard to claim 14-16, rotatable shat and impeller (12) are inherent features of a pump and the seal mechanism as disclosed by BBC is capable of being used in a centrifugal pump.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-9 and 17-20 rejected under 35 U.S.C. 103(a) as being unpatentable over EP-A-0,905,381 (Ebara Corp.) in view of DE 19,37,418A (BBC Brown Boveri & CIE).

With regard to claims 3-6, 17 and 18 Ebara discloses a seal mechanism for a fluid machine to prevent a fluid from leaking out of a high-pressure space into a low-pressure space in the fluid machine but does not teach plural passages. BBC discloses a fluid machine suitable to prevent a fluid from leaking out of a high-pressure space into a low-pressure space in the fluid machine, the seal mechanism comprising an annular seal member and can have plural passages (Page 3, lines 15-20 of the English translation of the German publication). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Ebara in view of BBC to drop the pressure of the chamber (BBC).

With regard to claims 7-9, 19 and 20 Ebara in view of BBC disclose all the limitations of the claimed invention except for the housing and seal member is made of metal or synthetic resin, housing and seal member is formed by molding. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the housing and seal member of metal or synthetic resin, and forming the seal

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member by molding in order to make the system durable. It has been held to be within the general skill of a worker in the art to select a known material and technology on the basis of its suitability for the intended use as a matter of obvious design choice.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIKANSHA S. DWIVEDI whose telephone number is (571)272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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